

WHAT IS CLAIMED IS:

1           1. A method of controlling semi-frozen liquid beverage in a dispensing machine having  
2         a bowl to contain said beverage therein, a motor to turn a helical auger blade within said bowl to  
3         scrape the semi-frozen beverage, and a compressor to cool said beverage, which method comprises:  
4                 actuating said compressor to said bowl until temperature of said beverage is cooled  
5         to reach an initial set point;  
6                 deactivating said compressor to said bowl after temperature of said beverage is cooled  
7         at or below said set point;  
8                 sensing torque on said motor caused by resistance to said auger blade after a defined  
9         time period following said switching off of said compressor;  
10                 activating said compressor to said bowl if torque on said motor is below a certain  
11         level; and  
12                 lowering said temperature set point from said initial set point to a lower set point to  
13         cool said product.

1           2. A method of controlling semi-frozen liquid beverage as set forth in Claim 1 wherein  
2         said initial step of activating said compressor to said bowl includes switching a solenoid switch.  
1           3. A method of controlling semi-frozen liquid beverage as set forth in Claim 1 including  
2         the steps of monitoring a pump which delivers said beverage to said bowl to determine amount of  
3         beverage delivered to said bowl and raising said set point when a selected amount has been  
4         delivered.

1           4. A method of controlling semi-frozen liquid beverage as set forth in Claim 1 including  
2       the steps of monitoring a pump timer to determine the amount of beverage delivered to said bowl  
3       and raising said set point when a selected amount has been delivered.

1           5. A semi-frozen liquid beverage dispensing machine having a bowl to contain semi-  
2       frozen beverage therein, which apparatus comprises:

3                 at least one refrigerated storage cavity for receiving a bulk storage container of liquid  
4       beverage;

5                 a fluid passageway tube extending between said bowl and said bulk storage container;

6                 a pump to transport said liquid from said bulk storage container through said tube and  
7       said bowl; and

8                 a sensor to sense liquid level of said semi-frozen beverage in said bowl of said  
9       machine, said sensor connected to said pump.

1           6. A self-contained liquid storage and delivery apparatus as set forth in Claim 5 wherein  
2       said bulk storage container is a flexible membrane bag within a rigid box and includes a connection  
3       nipple.

1           7. A semi-frozen liquid beverage dispensing machine as set forth in Claim 5 wherein  
2       said fluid passageway tube is within a refrigerated zone.

1           8.     A semi-frozen liquid beverage dispensing machine as set forth in Claim 5 wherein  
2     said bulk storage container includes a radio frequency ID tag which communicates with a  
3     transmitter/receiver in said machine.

1           9.     A method to store, deliver and automatically fill liquid beverage for supplying a  
2     separate, discrete semi-frozen liquid beverage machine having a bowl to contain beverage products,  
3     which method comprises:

4                 storing at least one bulk storage container of said beverage products in a refrigerated  
5     storage cavity separate and discrete from said liquid beverage machine;

6                 transporting said beverage products from said storage container in said refrigerated  
7     storage cavity through a thermally conductive passageway into a bowl of said beverage machine by  
8     pumping with a pump; and

9                 sensing liquid level with a liquid level sensor in said bowl in order to activate or  
10    deactivate said pumping.

1           10.    A method as set forth in Claim 9 including the additional step of removing said bulk  
2     storage container of said liquid beverage from said cavity and replacing with another storage  
3     container.

1           11.    A method to store, deliver and automatically fill liquid beverage for a semi-frozen  
2     liquid beverage machine having a bowl to contain beverage products, which method comprises:

3                   storing at least one bulk storage container of said beverage products in a refrigerated  
4                   storage cavity within said liquid beverage machine;

5                   transporting said beverage products from said storage container in said refrigerated  
6                   storage cavity through a thermally conductive passageway into said bowl of said beverage machine;

7                   and

8                   delivering water from a water supply to deliver water to a bowl.

1                 12. A method to store, deliver and automatically fill liquid beverage for a semi-frozen  
2                   liquid beverage machine having a bowl to contain beverage products, which method comprises:

3                   storing at least one bulk storage container of said beverage products in a refrigerated  
4                   storage within said liquid beverage machine;

5                   transporting said beverage products from said storage container in said refrigerated  
6                   storage cavity through a thermally conductive passageway into said bowl of said beverage machine;

7                   and

8                   wherein the step of transporting said liquid beverage includes delivering said liquid  
9                   beverage to said bowl below the liquid level in said bowl.

1                 13. A bowl for a beverage dispenser, which bowl comprises:

2                   an elongated cylindrical body;

3                   an open back capable of mating with said dispenser; and

4                   a closed, partially domed front.

1           14. A bowl for a beverage dispenser as set forth in Claim 13 wherein an  
2           cylindrical body is at an angle to horizontal plane of said dispenser.

1           15. A bowl for a beverage dispenser as set forth in Claim 13 wherein said  
2           body has a port to receive a pin extending from said dispenser in order to lock said bo

1           16. A bowl for a beverage dispenser as set forth in Claim 13 wherein said bo  
2           a cylindrical evaporator through said open back.